

4. (Amended) A nickel base superalloy comprising 3.0 to 12 wt% chromium, up to 3.0 wt% molybdenum, 3.0 to 10 wt% tungsten, up to 5.0 wt% rhenium, 6.0 to 12 wt% tantalum, 4.0 to 7.0 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon, up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel, said nickel base superalloy having a microstructure which is pore-free and eutectic  $\gamma$  -  $\gamma'$  free, said microstructure having a gamma prime morphology which includes a bimodal  $\gamma'$  distribution, said bimodal  $\gamma'$  distribution including a uniform distribution of large  $\gamma'$  particles in a continuous gamma matrix and a second and uniform distribution of fine  $\gamma'$  particles, said large  $\gamma'$  particles being octet shaped and having an average particle size in the range of  $1.0\mu$  to  $20\mu$  and the fine  $\gamma'$  particles being cuboidal particles and having an average particle size in the range of from  $0.45\mu$  to  $0.55\mu$ .

---

5. (Amended) A single crystal nickel base superalloy having a microstructure which is pore-free and eutectic  $\gamma$  -  $\gamma'$  free and a

gamma prime morphology which includes a bimodal  $\gamma'$  distribution having large  $\gamma'$  particles with a particle size in the range of from  $1.0\mu$  to  $20\mu$  and fine  $\gamma'$  particles, said fine  $\gamma'$  particles having a particle size in the range of from  $0.45\mu$  to  $0.55\mu$ .

11. (Amended) A single crystal nickel base superalloy according to claim 7, wherein said large  $\gamma'$  particles have an octet shape and said fine  $\gamma'$  particles have a cuboidal shape.

92